

Work Order ID 117555

April-25-14 10:21:24 AM

\*117555\*

Page 1

Item ID: D5046-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Co-Pilot Collective Head

4.0

Start Date: 5/07/14

Start Qty: 12.00

\*12\*

Cust Item ID:

Required Date: 5/07/14

Req'd Qty: 12.00

\*12\*

Customer:

Reference:

Approvals:

Process Plan:

W

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D5046

A

100

Cut blanks as per folio

0.00

\*100\*

Bandsaw

Memo

0.00

Jeaspa Bandsaw

CUT BLANK AT 5.500"

12

0

MH 14/05/02

110

0.00

\*110\*

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

MACHINE AS PER DWG & FOLIO FB296/ D5046-1

FOLIO REV: AA

DWG REV: A

DAS  
08  
9-89

B.A

14/05/08

4

0

DAS  
14  
9-89

14/05/07

\*\*\*DO NOT BUFF OR POLISH PART\*\*\*

DEBURR



# Work Order ID 117555

April-25-14 10:21:24 AM

\*117555\*

Page 2

Item ID: D5046-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Co-Pilot Collective Head

Stop \*NS2\*

Start Date: 5/07/14

Start Qty: 12.00

\*12\*

Cust Item ID:

Required Date: 5/07/14

Req'd Qty: 12.00

\*12\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

\*120\*

QC

Memo

0.00

Quality Control

DAS  
14  
9-89

14/05/07

130

0.00

\*130\*

Mill Conv

Memo

0.00

Conventional Milling Machine

DRILL REMAINING 2 HOLES AS PER DWG.

DWG REV: A

DAS  
13  
9-89

14-5-9

140

QC2- Inspect parts off machine FAI/FAIB

0.00

\*140\*

QC

Memo

0.00

Quality Control

DAS  
13  
9-89

14-5-9





# Work Order ID 117555

April-25-14 10:21:24 AM

**\*117555\***

Page 3

Item ID: D5046-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Co-Pilot Collective Head  
 Start Date: 5/07/14 Start Qty: 12.00 **\*12\*** Cust Item ID:  
 Required Date: 5/07/14 Req'd Qty: 12.00 **\*12\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 <b>*150*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00				4			DAS 25 9-89 14-5-12
160 <b>*160*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>w/o</u> 116354  Memo	0.00  0.00				4	12	14-5-12	DAS 25 9-89
170 <b>*170*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00				ML	14-05-12		WKF 14-5-12

030  
22  
030

030  
22  
030



# Picklist Print

April-25-14 10:21:24 AM

Page 1

Work Order ID: 117555

\*117555\*

Parent Item: D5046-1

\*D5046-1\*

Parent Item Name: Co-Pilot Collective Head

Start Date: 5/07/14

Required Date: 5/07/14

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV. A NEW ISSUE JFS 14/04/11 VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B2.000X05.00 0		Purchased		No		100	f	2.5000	0.46	6			

\*M6061T6B2 000X05 000\*

\*\*

6061T6 Bar 2.00 x 5.000

Location	Loc Qty	Loc Code
MAT	2.5	
m128866	2.5	
m 128980		

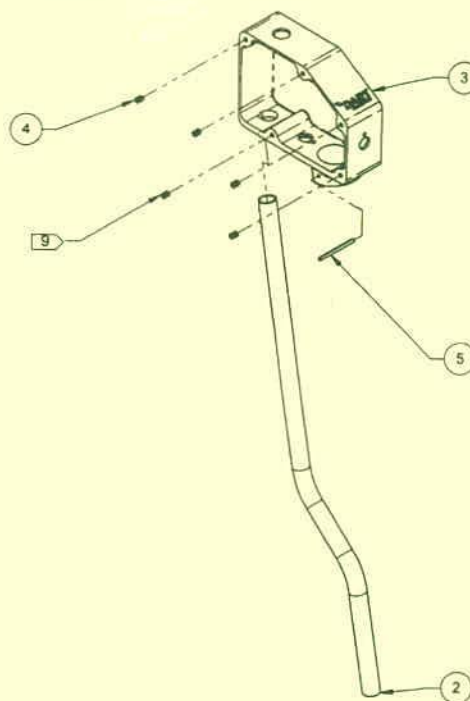
2.5  
~~2.5~~  
3.275

14/05/02

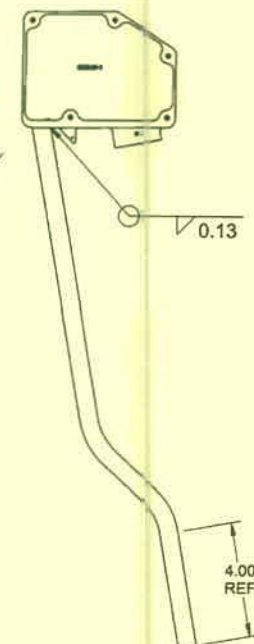




ITEM	QTY	P/N	DESCRIPTION
1	X	D5046-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
2	1	D-4410-7	CONDUIT
3	1	D5046-1	CO-PILOT COLLECTIVE HEAD
4	5	90296A108	HELI-COIL INSERT (6-32 X 0.276)
5	1	MS171539	PIN



117555 MJS  
1404-25



D5046-041 WELDING DETAIL

RELEASED  
2014-04-06

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.91 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING

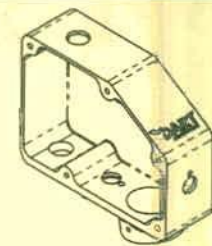
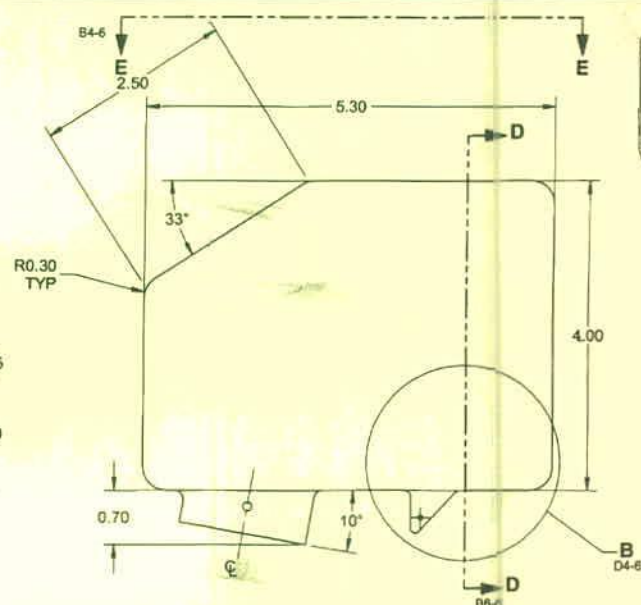
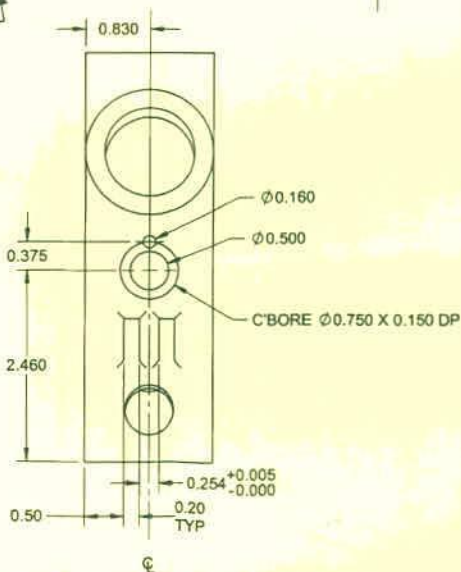
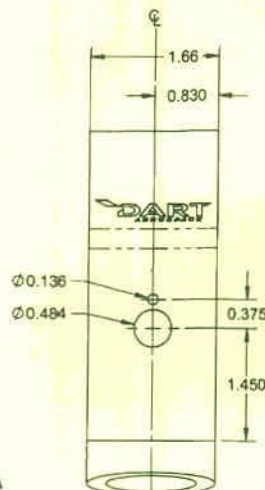
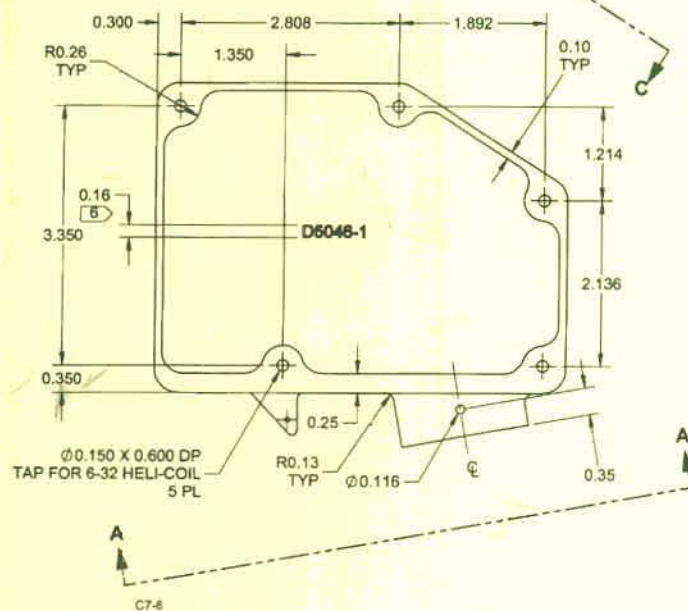
D5046-041 CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)

A NEW ISSUE		VS	14.01.22
REV.	DESCRIPTION		BY DATE
DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	JFS	D5046	SHEET 1 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
DATE	14.01.22		

APPROVED

COPYRIGHT © 2014 BY DART AEROSPACE USA, INC.  
THIS DOCUMENT IS PRELIMINARY AND IS SUBJECT TO THE EXPIRATION DATE OF 10 YEARS FROM THE DATE OF ISSUANCE. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.





- NOTES:
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUM NUM BAR  
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
REF DART SPEC M6061T6B
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.3 IN THIS AREA TO MAX DEPTH  
OF 0.010 WITH A MIN. TOOL RAD OF R0.010
  - 7) WEIGHT: 0.74 lbs

D5046-1 CO-PILOT COLLECTIVE HEAD (205)

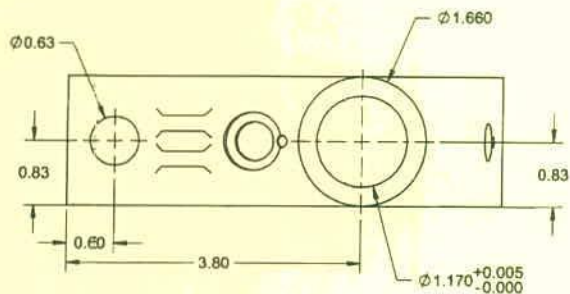
APPROVED

DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	JFS	D5046	SHEET 5 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
DATE	14.01.22	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC.	

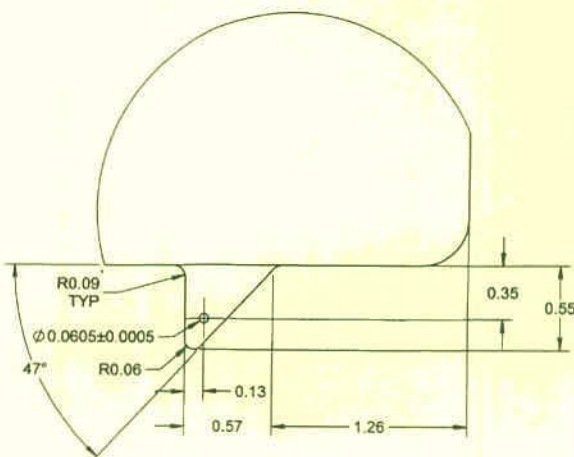
RELEASED  
2014-04-04



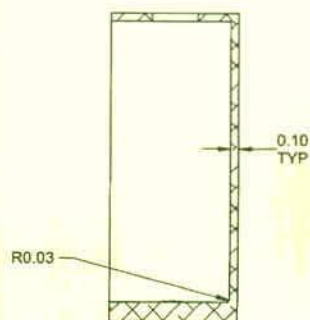




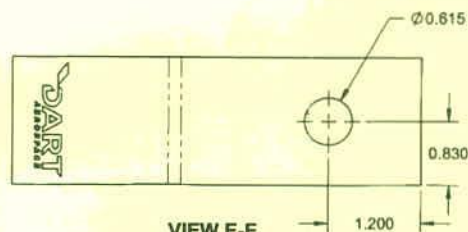
**VIEW A-A**  
B7-5



**DETAIL B**  
C2-5



**SECTION D-D**  
C2-5



**VIEW E-E**  
D3-5



**VIEW C-C**  
D6-5

- NOTES:**
- 1) MATERIAL: N/A
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.74 lbs
  - 8) ENGRAVE "DART" LOGO AS SHOWN 0.003-0.005 DP

**D5046-1 CO-PILOT COLLECTIVE HEAD (205)**  
**DETAIL VIEWS**

APPROVED

DESIGN	VS	<b>DART AEROSPACE USA, INC.</b> KENT, WA	
DRAWN	VS		
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	JFS	<b>D5046</b>	SHEET 8 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	<b>CO-PILOT COLLECTIVE HEAD</b>	NTS
DATE	14.01.22	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS RELEASED ON THE OPEN SOURCE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

**RELEASED**  
2014-04-04  
MP





<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 1
<b>Description:</b> CD-PILOT COLLECTIVE HEAD		<b>Part Number:</b> D5046-1
<b>Inspection Dwg:</b> D5046 Rev: A		<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.350	$\pm 0.05$	3.350	—		Vern	HL-06
R.26	$\pm 0.30$	R.260	—		R-6	
.300	$\pm 0.05$	.300	—		Vern	HL-06
1.350	$\pm 0.05$	1.350	—		"	
2.808	$\pm 0.05$	2.808	—		"	
1.892	$\pm 0.05$	1.892	—		"	
.10	$\pm 0.30$	.098	—		"	
1.214	$\pm 0.05$	1.214	—		"	
2.134	$\pm 0.05$	2.136	—		"	
.35	$\pm 0.30$	.348	—		"	
Ø.116	$\pm 0.009$	Ø.116	—		"	
R.13	$\pm 0.30$	R.125	—		R-6	
.25	$\pm 0.30$	.249	—		Vern	HL-06
Ø.150	$\pm 0.005$	Ø.150	—		"	
1.66	$\pm 0.30$	1.658	—		"	
.830	$\pm 0.05$	.830	—		Vern	SL-9
Ø.136	$\pm 0.005$	.136	—		"	
Ø.484	$\pm 0.006$	.485	—		"	
.375	$\pm 0.10$	.375	—		"	
1.450	$\pm 0.10$	1.450	—		"	
5.30	$\pm 0.30$	5.300	—		Vern	HL-06
4.00	$\pm 0.30$	3.996	—		"	
.70	$\pm 0.30$	.695	—		"	

<b>Measured by:</b> DAS 14 13 9-89	<b>Audited by:</b> JL	<b>Preliminary Approval:</b>
<b>Date:</b> 14/05/07	<b>Date:</b> 14/5-77	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

0-10  
13  
DVS



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	
<b>Description:</b> CO-PILOT COLLECTIVE HEAD		<b>Part Number:</b>	D5046-1
<b>Inspection Dwg:</b> D5046 <b>Rev:</b> A		<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
10°	± 1/2°	10°	—		C-square	
33°	± 1/2°	33°	—		"	
R.30	±.030	R.300	—		R-G	
2.50	±.030	2.500	—		Vern	ML-06
2.460	±.010	2.460	—		"	
.375	±.010	.375	—		"	
.830	±.010	.827	—		"	
Ø.166	+0.005 -0.001	Ø.160	—		"	
Ø.500	+0.006 -0.001	Ø.500	—		"	
Ø.750X1.150	±.010X±.010	Ø.750X1.50	—		"	
.254	±.0005	.256	—		"	
.20	±.030	.200	—		"	
.50	±.030	.498	—		"	
Ø.63	±.010	.625	—		"	
.83	±.030	.829	—		"	
.60	±.030	.599	—		"	
3.80	±.030	3.800	—		"	
Ø1.660	±.010	Ø1.662	—		"	
Ø1.170	+0.005 -0.000	Ø1.171	—		"	
R.03	±.030	R.030	—		R-G	
.10	±.030	.100	—		Vern	ML-06
Ø.615	+0.008 -0.001	Ø.615	—		"	
.830	±.010	.828	—		"	

<b>Measured by:</b> DAS 14 9-99		<b>Audited by:</b> [Signature]	<b>Preliminary Approval:</b>
<b>Date:</b> 14/05/02		<b>Date:</b> 14-5-02	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15









